

Date: Fri, 3 Jun 94 14:00:43 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #618
To: Info-Hams

Info-Hams Digest Fri, 3 Jun 94 Volume 94 : Issue 618

Today's Topics:

 IDing
Jupiter / Comet collision & radio astronomy
Legal Protections for Hams
ORBS\$154.2L.AMSAT
ORBS\$154.WEATH.AMSAT
RFD:Radio repair rip-off??
SSB Filters

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 3 Jun 1994 15:27:52 GMT
From: korie!newsworthy.West.Sun.COM!11-a!filloyd@ames.arpa
Subject: IDing
To: info-hams@ucsd.edu

In article <2s5sl8\$ihu@illuminati.io.com> hoagy@illuminati.io.com (Sir Hoagy)
writes:

>

>Don't go "This is AB1CDE monitoring 146.88" You don't *need* to
>say what frequency you're monitoring. To monitor means to
>listen for others who wish to talk. You're not doing it for the benefit
>of the listener on a scanner. If you're not sure what freq. you're
>listening in on, ask. If someone is there you'll find out. If you're
>NOT sure, get new equipment or fix the broken readout on yours.

In general it's unnecessary, but things which are defined as "in

general" usually have exceptions. Take for instance the case where Bob is monitoring a scanning receiver which is in another room. All of Bob's friends know that he is listening on the scanner and that it takes him a minute or two to come to the radio. In this case, the calling parties will mention which frequency they're on so that if Bob hears it, he'll know which frequency to tune when he gets back to the radio. This is no hypothetical case - Bob, K7PYD is a friend of mine.

>Don't say "73s" or "73's" It's "73".

OK. All those who care please hold up your hands....

>Don't use Q signals on phone. Use plain english.

Ok. I will if you will. When running the Phoenix Arizona swap net, it's sometimes easier to understand someone saying "QSL" than it is to understand "uh huh", "yup", "Yeah", "uhhhhh", "OK", and so on. I don't ask people to use "QSL" but it does not bother me when they do. The message is received and I move on to the next listing.

>Those are just a few things they've told me.

>Over and over again. So, if these hams, who are 60+ years old
>are telling me this, and they've been around for 40 years or so,
>then obviously they disagree with your ideas.

So what? Everybody disagrees with everybody. What else is new?
40 or so years of being anally retentive doesn't mean much to me.

>Talking about CW using CW abbreviations is fine. But, when I'm

>on phone, I don't like to hear "KB8SGL, what's your home QTH?"

>Ask me "Where are you located? Where do you live?" Plain English.

I have to agree. But I'll not embarrass someone on the air and make myself look like a butthead by pointing this out to them.

>Listeners to the ham bands on a scanner will wonder if we're

>some bunch of wierdos who can't speak normally.

>We're not cops. We're not military. We don't need to use

>10 codes(some amateurs do this), Q codes, CW codes when speaking
>phone.

People do it in person, why not over the radio? When I talk about

computers, I'll mention a VESA card and 8 meg of RAM. Should I have said, "A Video Electronics Standards Association card and 8 Megabytes of Random Access Memory"? Every hobby and activity has it's lingo. Ham radio is no different.

>I'm a football official. Each year, every week, almost every day,
>I glance at my rulebook. I read it. I read the casebook. The
>official's manual. I want to know the NEW rules, the NEW applications
>and how it's done NOW.

Oh. So you're a professional whistle blower and this is just another game for you. Well, guess what, it's fourth quarter and most of the audience has already left the stadium. Not many will hear, or care, about your next call.

>But, I get these 20+ year veteran officials who think that since
>they've been around for 20+ years, they can do it their way,
>use their rules, interpret it their ways, since they've been around
>so long, naturally, no one will question them!

Welcome to amateur radio.

>This is ludicrous. We have a method of doing things. We have a way.
>It's not "Well, it's just the way it is. Don't mess with it"
>It's like saying "Well, he drinks, he fights with people, and he's
>always in trouble with the cops. But, don't get upset, you see,
>because that's JUST the way he is. "
>
>That line of thinking produces stagnation and promotes non-growth.

There's a big difference here. For starters, there is no rule anywhere that states that any of the above mentioned practices are illegal. Granted, they may be unsavory, but they're legit. For example, you can note that a linebacker is ugly, but you can't flag him for it. It's just not in the rules. You just shrug your shoulders and go on about your business.

Have a nice day. And remember, it's a Hobby!

-fred

[Fred Lloyd, AA7BQ
[Sun Microsystems,

Fred.Lloyd@west.sun.com]
Systems Engineer]

[Phoenix, AZ

(602) 224-3517]

Date: 3 Jun 94 21:37:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: Jupiter / Comet collision & radio astronomy
To: info-hams@ucsd.edu

There has been quite a flurry of activity in the popular press about the forecast upcoming collision of a comet with the planet Jupiter in the July time frame. It is supposed to be quite an event, even though the collisions will occur on the far side of the planet.

Some time ago, I remember an article by Cornell Drentea in Ham Radio magazine about "amateur" radio astronomy and the ability to sense radio emissions (and I believe they were from Jupiter) in the 14-16 MHz range.

Has anyone seen any announcements or know of any attempt to monitor the radio wave emissions of Jupiter during this event? Certainly, most of the worlds optical telescopes will be trained on this, but is there any "grass roots" personal / amateur coordinated effort at monitoring this?

Please reply to the net or directly to: johnk@ATK.COM

Thanks 73

John Klingelhoeffter WB4LNM
Annapolis, Maryland

Date: 3 Jun 1994 15:45:08 GMT
From: ihnp4.ucsd.edu!usc!elroy.jpl.nasa.gov!news.aero.org!sparky1.aero.org!
cantrell@network.ucsd.edu
Subject: Legal Protections for Hams
To: info-hams@ucsd.edu

In article <Cqtq3s.Fu1@ss3.magec.com>, pegood@ss3.magec.com (Peter E. Goodman) writes:

|>

|> On a VERRRRRRY loosly related subject, how about eliminating the
|> "industrial exemption" clause in your state's engineering registration law?
|> These exemptions, which most if not all states have, allow unlicensed
|> "engineers (who may not even have any engineering education or experience)
|> to practice as engineers as long as they only design manufactured goods. Would
|> you allow an unlicensed physician, who can only kill one person at a time to
|> practice medicine? How about an unlicensed automtive "engineer" who could

|> kill many people with a single mistake?

|>

|> Thanks, and good luck!!

|>

|> 73,

|> Pete Goodman, P.E., NI9N

|>

You may not know it, but they already do! The Federal government employs physicians who need not pass the licensing exam of the state they are practicing in. I haven't noticed that the veterans are dropping like flies from inadequate care, though.

Having worked as an 'unlicensed engineer' for RCA designing microwave circuits (back when they still did that!), I don't see the need for eliminating this exception. Perhaps you can cite some cases where having passed the PE exam would have saved lives and reduced damages.

Yours, in curiosity,
cantrell

Date: 3 Jun 94 14:28:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS\$154.2L.AMSAT
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-154.N
2Line Orbital Elements 154.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM WA5QGD FORT WORTH,TX June 3, 1994
BID: \$ORBS-154.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:

1 AAAAAU 00 0 0 BBBB.BBBBBBBB .CCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

A0-10

1 14129U 83058B 94150.69677441 -.000000061 00000-0 10000-3 0 2876
2 14129 27.1154 325.0714 6022081 182.4311 172.2849 2.05880205 82429

U0-11

1 14781U 84021B 94151.06697961 .00000105 00000-0 25653-4 0 6976
2 14781 97.7873 166.5950 0011480 330.9202 29.1364 14.69214238547796

RS-10/11

1	18129U	87054A	94151.51951043	.000000057	000000-0	45799-4	0	9061
2	18129	82.9242	341.1657	0013332	71.1063	289.1529	13.72337845347628	
AO-13								
1	19216U	88051B	94147.27035052	-.000000441	000000-0	10000-4	0	9209
2	19216	57.8366	250.5249	7207923	342.4663	2.0218	2.09724553	45572
FO-20								
1	20480U	90013C	94148.87864649	-.000000033	000000-0	-45188-5	0	6935
2	20480	99.0336	304.3511	0541298	23.2290	339.2310	12.83225769201650	
AO-21								
1	21087U	91006A	94150.49039325	.000000094	000000-0	82657-4	0	4752
2	21087	82.9417	155.8080	0036271	131.0991	229.3291	13.74540326167154	
RS-12/13								
1	21089U	91007A	94148.13976132	.000000042	000000-0	27995-4	0	6961
2	21089	82.9227	26.3188	0029245	161.2877	198.9366	13.74041143165893	
ARSENE								
1	22654U	93031B	94148.14207755	-.000000130	000000-0	00000	0	0
2	22654	1.8240	100.0387	2920689	182.3578	176.3320	1.42202262	918
UO-14								
1	20437U	90005B	94148.77131663	.000000026	000000-0	26965-4	0	9989
2	20437	98.5887	233.8092	0010120	249.2130	110.7967	14.29844035226815	
AO-16								
1	20439U	90005D	94148.26783817	.000000023	000000-0	26004-4	0	7977
2	20439	98.5973	234.5240	0010441	251.8891	108.1154	14.29897857226757	
DO-17								
1	20440U	90005E	94148.22411695	.000000019	000000-0	24245-4	0	7977
2	20440	98.5984	234.7976	0010539	250.6532	109.3505	14.30037363226760	
WO-18								
1	20441U	90005F	94148.26905745	.000000015	000000-0	22857-4	0	7991
2	20441	98.5983	234.8454	0011068	251.1899	108.8082	14.30011720226776	
LO-19								
1	20442U	90005G	94148.24856903	.000000023	000000-0	25921-4	0	7962
2	20442	98.5963	235.0753	0011443	249.3737	110.6220	14.30107631226780	
UO-22								
1	21575U	91050B	94148.22067990	.000000036	000000-0	26734-4	0	5009
2	21575	98.4361	223.1211	0008131	357.3213	2.7927	14.36916027150217	
KO-23								
1	22077U	92052B	94148.87977740	-.000000037	000000-0	10000-3	0	3956
2	22077	66.0837	320.4068	0013878	293.2309	66.7247	12.86286268	84304
AO-27								
1	22825U	93061C	94148.75222038	.000000021	000000-0	26231-4	0	2942
2	22825	98.6520	224.7518	0007954	270.5496	89.4773	14.27624265	34912
IO-26								
1	22826U	93061D	94148.66455740	.000000025	000000-0	28036-4	0	2940
2	22826	98.6516	224.6994	0008492	272.6887	87.3324	14.27728000	34900
KO-25								
1	22830U	93061H	94148.74959187	.000000024	000000-0	27213-4	0	2998
2	22830	98.5537	222.2416	0010549	233.7819	126.2388	14.28054429	34922
NOAA-9								

1	15427U	84123A	94152.88306002	.000000105	00000-0	80156-4	0	8242
2	15427	99.0546	203.1942	0014092	264.1172	95.8393	14.13619020488187	
NOAA-10								
1	16969U	86073A	94152.98973369	.000000058	00000-0	43064-4	0	7240
2	16969	98.5103	162.4582	0013883	18.7855	341.3832	14.24887402400440	
MET-2/17								
1	18820U	88005A	94151.40270693	.000000024	00000-0	84467-5	0	2994
2	18820	82.5390	281.9318	0015172	226.5925	133.3968	13.84715655320033	
MET-3/2								
1	19336U	88064A	94151.52504778	.000000051	00000-0	10000-3	0	2922
2	19336	82.5409	335.4775	0016378	308.6445	51.3205	13.16967657281065	
NOAA-11								
1	19531U	88089A	94152.98817862	-.000000028	00000-0	10000-4	0	6467
2	19531	99.1680	141.5287	0011559	172.0081	188.1276	14.12989331293077	
MET-2/18								
1	19851U	89018A	94152.03234819	.000000045	00000-0	26819-4	0	2937
2	19851	82.5169	156.8006	0012615	274.1559	85.8154	13.84365558265452	
MET-3/3								
1	20305U	89086A	94151.51035704	.000000044	00000-0	10000-3	0	618
2	20305	82.5526	281.5035	0006977	342.8814	17.2118	13.04410247220722	
MET-2/19								
1	20670U	90057A	94153.19649084	.000000040	00000-0	22727-4	0	7984
2	20670	82.5473	220.3714	0015262	183.4095	176.6966	13.84188469198541	
FY-1/2								
1	20788U	90081A	94151.55189960	.000000354	00000-0	26268-3	0	9827
2	20788	98.8364	172.2130	0016497	56.4578	303.8160	14.01346839191374	
MET-2/20								
1	20826U	90086A	94149.07330551	.000000069	00000-0	48640-4	0	8059
2	20826	82.5256	161.1899	0014886	97.4019	262.8836	13.83582155185112	
MET-3/4								
1	21232U	91030A	94148.56174644	.000000050	00000-0	10000-3	0	7038
2	21232	82.5425	183.4669	0011578	234.4922	125.5106	13.16462790148779	
NOAA-12								
1	21263U	91032A	94152.99997481	.000000545	00000-0	26407-3	0	498
2	21263	98.6246	181.1146	0011965	277.1427	82.8403	14.22412108158379	
MET-3/5								
1	21655U	91056A	94148.45432105	.000000051	00000-0	10000-3	0	7123
2	21655	82.5512	130.6819	0011557	248.1688	111.8208	13.16830563133866	
MET-2/21								
1	22782U	93055A	94148.68922043	.000000063	00000-0	43931-4	0	3057
2	22782	82.5491	221.8821	0021015	282.9730	76.9084	13.83007584	37391
POSAT								
1	22829U	93061G	94148.75442192	.000000035	00000-0	31967-4	0	2870
2	22829	98.6491	224.8119	0009251	255.4590	104.5565	14.28026396	34921
MIR								
1	16609U	86017A	94151.24592674	.000004896	00000-0	75236-4	0	6297
2	16609	51.6483	271.0844	0001970	346.1860	13.9079	15.56249388473400	
HUBBLE								

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1 20580U 90037B   94152.21663965 .00000512  00000-0  35846-4 0  4929
2 20580   28.4695 338.5655 0006073 279.9168  80.0726 14.90615418 27005
GRO
1 21225U 91027B   94149.88243731 .00002212  00000-0  46180-4 0  1031
2 21225   28.4617 359.2112 0003353   5.4958 354.5681 15.40862011 54111
UARS
1 21701U 91063B   94151.54499032 -.00003847  00000-0 -31456-3 0  5358
2 21701   56.9959 225.7702 0005799 111.4559 248.7094 14.96547438148443
/EX

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Date: 3 Jun 94 14:26:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS\$154.WEATH.AMSAT
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-154.W
Orbital Elements 154.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM WA5QGD FORT WORTH,TX June 3, 1994
BID: \$ORBS-154.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 94152.88306002
Element set: 824
Inclination: 99.0546 deg
RA of node: 203.1942 deg
Eccentricity: 0.0014092
Arg of perigee: 264.1172 deg
Mean anomaly: 95.8393 deg
Mean motion: 14.13619020 rev/day
Decay rate: 1.05e-06 rev/day^2
Epoch rev: 48818
Checksum: 292

Satellite: NOAA-10
Catalog number: 16969
Epoch time: 94152.98973369
Element set: 724
Inclination: 98.5103 deg
RA of node: 162.4582 deg
Eccentricity: 0.0013883
Arg of perigee: 18.7855 deg
Mean anomaly: 341.3832 deg

Mean motion: 14.24887402 rev/day
Decay rate: 5.8e-07 rev/day^2
Epoch rev: 40044
Checksum: 331

Satellite: MET-2/17
Catalog number: 18820
Epoch time: 94151.40270693
Element set: 299
Inclination: 82.5390 deg
RA of node: 281.9318 deg
Eccentricity: 0.0015172
Arg of perigee: 226.5925 deg
Mean anomaly: 133.3968 deg
Mean motion: 13.84715655 rev/day
Decay rate: 2.4e-07 rev/day^2
Epoch rev: 32003
Checksum: 309

Satellite: MET-3/2
Catalog number: 19336
Epoch time: 94151.52504778
Element set: 292
Inclination: 82.5409 deg
RA of node: 335.4775 deg
Eccentricity: 0.0016378
Arg of perigee: 308.6445 deg
Mean anomaly: 51.3205 deg
Mean motion: 13.16967657 rev/day
Decay rate: 5.1e-07 rev/day^2
Epoch rev: 28106
Checksum: 316

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 94152.98817862
Element set: 646
Inclination: 99.1680 deg
RA of node: 141.5287 deg
Eccentricity: 0.0011559
Arg of perigee: 172.0081 deg
Mean anomaly: 188.1276 deg
Mean motion: 14.12989331 rev/day
Decay rate: -2.8e-07 rev/day^2
Epoch rev: 29307
Checksum: 325

Satellite: MET-2/18

Catalog number: 19851
Epoch time: 94152.03234819
Element set: 293
Inclination: 82.5169 deg
RA of node: 156.8006 deg
Eccentricity: 0.0012615
Arg of perigee: 274.1559 deg
Mean anomaly: 85.8154 deg
Mean motion: 13.84365558 rev/day
Decay rate: 4.5e-07 rev/day^2
Epoch rev: 26545
Checksum: 326

Satellite: MET-3/3
Catalog number: 20305
Epoch time: 94151.51035704
Element set: 61
Inclination: 82.5526 deg
RA of node: 281.5035 deg
Eccentricity: 0.0006977
Arg of perigee: 342.8814 deg
Mean anomaly: 17.2118 deg
Mean motion: 13.04410247 rev/day
Decay rate: 4.4e-07 rev/day^2
Epoch rev: 22072
Checksum: 257

Satellite: MET-2/19
Catalog number: 20670
Epoch time: 94153.19649084
Element set: 798
Inclination: 82.5473 deg
RA of node: 220.3714 deg
Eccentricity: 0.0015262
Arg of perigee: 183.4095 deg
Mean anomaly: 176.6966 deg
Mean motion: 13.84188469 rev/day
Decay rate: 4.0e-07 rev/day^2
Epoch rev: 19854
Checksum: 343

Satellite: FY-1/2
Catalog number: 20788
Epoch time: 94151.55189960
Element set: 982
Inclination: 98.8364 deg
RA of node: 172.2130 deg
Eccentricity: 0.0016497

Arg of perigee: 56.4578 deg
Mean anomaly: 303.8160 deg
Mean motion: 14.01346839 rev/day
Decay rate: 3.54e-06 rev/day^2
Epoch rev: 19137
Checksum: 329

Satellite: MET-2/20
Catalog number: 20826
Epoch time: 94149.07330551
Element set: 805
Inclination: 82.5256 deg
RA of node: 161.1899 deg
Eccentricity: 0.0014886
Arg of perigee: 97.4019 deg
Mean anomaly: 262.8836 deg
Mean motion: 13.83582155 rev/day
Decay rate: 6.9e-07 rev/day^2
Epoch rev: 18511
Checksum: 324

Satellite: MET-3/4
Catalog number: 21232
Epoch time: 94148.56174644
Element set: 703
Inclination: 82.5425 deg
RA of node: 183.4669 deg
Eccentricity: 0.0011578
Arg of perigee: 234.4922 deg
Mean anomaly: 125.5106 deg
Mean motion: 13.16462790 rev/day
Decay rate: 5.0e-07 rev/day^2
Epoch rev: 14877
Checksum: 303

Satellite: NOAA-12
Catalog number: 21263
Epoch time: 94152.99997481
Element set: 49
Inclination: 98.6246 deg
RA of node: 181.1146 deg
Eccentricity: 0.0011965
Arg of perigee: 277.1427 deg
Mean anomaly: 82.8403 deg
Mean motion: 14.22412108 rev/day
Decay rate: 5.45e-06 rev/day^2
Epoch rev: 15837
Checksum: 314

Satellite: MET-3/5
Catalog number: 21655
Epoch time: 94148.45432105
Element set: 712
Inclination: 82.5512 deg
RA of node: 130.6819 deg
Eccentricity: 0.0011557
Arg of perigee: 248.1688 deg
Mean anomaly: 111.8208 deg
Mean motion: 13.16830563 rev/day
Decay rate: 5.1e-07 rev/day^2
Epoch rev: 13386
Checksum: 289

Satellite: MET-2/21
Catalog number: 22782
Epoch time: 94148.68922043
Element set: 305
Inclination: 82.5491 deg
RA of node: 221.8821 deg
Eccentricity: 0.0021015
Arg of perigee: 282.9730 deg
Mean anomaly: 76.9084 deg
Mean motion: 13.83007584 rev/day
Decay rate: 6.3e-07 rev/day^2
Epoch rev: 3739
Checksum: 302

/EX

Date: Fri, 3 Jun 1994 17:01:47 GMT
From: yale.edu!news.yale.edu!revco@yale.arpa
Subject: RFD:Radio repair rip-off??
To: info-hams@ucsd.edu

I'd like to get the groups opinion. Keep in mind while I know some radio theory, I'm no repair person. Question: I decided to try to get my original transceiver a Kenwood TS 520 back on the air. In trying to tune up, there was basically no power output. So I left it off a a local repair shop and told the owner I though it might well need new finals and alignment. He charged me a \$45 "bench fee" which would not be refundable but would be credited toward the repairs, and bascially sat on the set for a couple of weeks. They send the work out to a technician. Anyway when I called back for the estimate they gave me a quote of \$225 to \$250. It was apparent that they never

actually opened up the set, and that the quote was based on my impression that it might need new finals and alignment.

So I was miffed that the so called "bench fee" estimate was not based on their actually looking at the set, and that the estimate appeared to approach 60% or more of the value of the transceiver judging from prices I've seen posted for used equipment.

Perhaps I should have been more "aware" of the potential for losing my money. My questions are: (1) shouldn't I have expected them to have at least opened the set up for the \$45; (2) could the repairs really be expected to get into that range, assuming the worst.

Thanks for thoughts,

Jim Revkin KA1QJ revco@revco.med.yale.edu

Date: 3 Jun 1994 16:19:35 GMT
From: lll-winken.llnl.gov!overload.lbl.gov!dog.ee.lbl.gov!agate!
howland.reston.ans.net!swrinde!sdd.hp.com!hpscit.sc.hp.com!rkarlqu@ames.arpa
Subject: SSB Filters
To: info-hams@ucsd.edu

In article <CqoBJE.K96@hpmqmoa.sqf.hp.com>,
David Stockton <dstock@hpmqoca.sqf.hp.com> wrote:

>
> It depends a lot on the frequency, the circuit, and production
>tolerances. With care a 200 ppm (parts per million) tuning range can be
>reasonably reliably achieved for a favourable frequency and circuit.
>
> beware that overtone crystals are far far harder to pull. In general
>terms, if you have two crystals at the same frequency, the overtone one
>will give a swing reduced by a factor roughly equal to the square of its
>overtone number.
>
> Beware of attempts to pull an oscillator too far, you'll suffer from
>temperature dependant failure to start, etc etc.
>
> David GM4ZNX

Actually, with the right circuit, you can reliably pull a fundamental crystal 1000 PPM (i.e. +/-500 PPM). If necessary you can increase that to 2000, 3000 or even 4000 PPM with some degradation of phase noise and temperature stability. Similarly, 3rd overtone crystals can be reliably pulled 100 PPM and 5th overtone crystals can be reliably pulled 40 PPM.

How do you do this? Build an LC Colpitts oscillator at the frequency

of your crystal (get it within a few %). Now, insert the following circuit in series with the emitter of the transistor: the crystal in series with the tuning diode in series with an inductor which resonates with the diode at the xtal frequency when in the middle of the diode's tuning range. Finally, install a shunt inductor directly across the crystal such that it resonates out the C-zero of the crystal at the crystal frequency. C-zero is typically 5 pF. Make sure this inductor has a high enough SRF (i.e. >> xtal frequency). Note that the finished oscillator has 3 inductors.

If you have starting problems, you might have a VHF parasitic oscillation. The old trick with a ferrite bead on the base or collector will fix this. A 2N5179 is a good transistor to use.

Rick Karlquist N6RK
rkarlqu@scd.hp.com

Date: 3 Jun 1994 09:53:16 -0600
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!spool.mu.edu!
mnemosyne.cs.du.edu!nyx10.cs.du.edu!not-for-mail@network.ucsd.edu
To: info-hams@ucsd.edu

References <rogjdCqq72H.6u4@netcom.com>, <2slc6j\$kkkn@sugar.NeoSoft.COM>,
<gregCqtnE8.H5o@netcom.com>r-mail
Subject : Re: 440 in So. Cal.

In article <gregCqtnE8.H5o@netcom.com>, Greg Bullough <greg@netcom.com> wrote:
>However, in areas where spectrum is becoming critical, we believe that the
>band plan should dictate that OPEN repeaters have priority, sometimes to the
>extent that even existing closed sites are offered the option of either
>opening up or giving up the allocation. And we also believe that the
>'band plan,' as developed by local and national organized Amateur Radio
>groups has sufficient authority to dictate fair spectrum usage.

Right. How are you going to compensate the owners of closed repeaters - and remember that, according to the FCC, _ALL_ repeaters are closed - for the loss of their investment of time and money in building up their system? Remember that, ESPECIALLY in Southern California, the hams that built their systems on 440, often at greater expense than they would have had if they were on 2, not only for the repeater but also for their users' radios.

Any coordinating body that tries to take away folks' coordinations without a good cause - and suddenly deciding that closed repeaters are less worthy than open ones is not likely to be seen by a court as 'good cause' - is going to get its collective butts sued off. I can cite at least one such body that will

not expose itself to that kind of liability: the one I'm currently a director of, the Texas VHF-FM Society.

>We believe that groups that put up closed repeaters must make this trade
>off... ...that that is the price of exclusivity. Presumably, however, the
>greater occupancy should offer them a better market for sale of the old
>'machine,' should they have to move to 1.2Ghz.

Right. It may get them \$500 instead of \$250. Further, why should they trust that their investment in all new gear, not only for the repeater but also for the users, won't be similarly thrown away by the coordinating bodies?

>The 'closed' repeater has been the counter-example to the 'no-one owns
>a frequency' principle which has guided amateur radio for its entire
>existence. I see no reason to turn away from the older principle in order
>to keep the price of exclusivity low.

I don't claim that a coordinated repeater - open or closed - or its users own a frequency. I do claim, and the FCC and courts back me up, that the trustee of any repeater can legitimately prevent anyone he desires from using HIS STATION! IT'S THE STATION, STUPID!

--

Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.
To Sarah Brady, Howard Metzenbaum, Dianne Feinstein, and Charles Schumer:
Thanks. Without you, I would be neither a gun owner nor an NRA life member.

Date: Fri, 3 Jun 1994 05:05:11 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
europa.eng.gtefsd.com!ceylon!sundog.tiac.net!usenet.elf.com!rpi!psinntp!
hk.super.net!uxmail!dma039.ust.hk!ee_hflo@network.UCSD
To: info-hams@ucsd.edu

References <1994May30.134341.23782@uxmail.ust.hk>,
<jkauffmnCqMJ6I.K1o@netcom.com><1994May31.025939.28917@uxmail.ust.hk>,
<236@doghouse.win.net>.co
Subject : Re: Six meter HT

Joe Salemi (jsalemi@doghouse.win.net) wrote:

:

: In article <1994May31.025939.28917@uxmail.ust.hk>, Michael Lo
(ee_hflo@dma039.ust.hk) writes:

: >: Yes, Azden makes a 6m HT (FM) and was reviewed in '73' magazine not
: >: more than 6 months ago as I recall. I've seen adds for 7 and 21 MHz ssb HTs
: >: but not for 50 MHz.
: >

: > How about the performance of Azden 6m ? etc intermod, power....
: >

: Never used one, Michael, so I can't say how it does on intermod, but it
: puts out 10w, and the reviewer in 73 said that he worked quite a
: distance during a 6m opening with the 10w.

: 73...joe
:

Intermod....yes..It should be consider...

Please give me some suggestion about purchase 6 meter equipment.

How about 6 meter moible ?

Michael Lo

VR2YJR a ham from Hong Kong....

- The prefix of Hong Kong was changed from VS6 to VR2 for three years...

End of Info-Hams Digest V94 #618
